

AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

Listing of the Claims

1. (Currently Amended) An optical ~~computer-readable~~ recording medium having a data structure for managing reproduction of video data having multiple playback paths, comprising:

a data directory storing a plurality of clip files of the video data having multiple playback paths, each clip file being associated with one path of the multiple playback paths, the video data including a plurality of data packets, each data packet having a packet number differentiating the data packet from the plurality of data packets;

a management directory storing management information for managing reproduction of the video data having multiple playback paths, the management information including a plurality of clip information files, each clip file being associated with one of the clip information files, the associated clip information file providing at least one map, the map identifying at least one entry point for the associated clip file by identifying the packet number of the data packet of the at least one entry point, the map mapping a presentation time stamp to a corresponding address in the associated clip file; and

a playlist directory storing at least one playlist file including at least one

playitem, the plurality of clip files being associated with the playlist file, the playitem identifying a same playing interval in each clip file of the plurality of clip files associated with the multiple playback paths, the playitem identifying the clip information files associated with the clip files of the multiple playback paths playing interval, the playlist file storing connection information between a previous playitem and a current playitem.

2. (Currently Amended) The optical ~~computer-readable~~ recording medium of claim 1, wherein a group of playlist files is associated with each playback path.

3-5. (Canceled)

6. (Currently Amended) The optical ~~computer-readable~~ recording medium of claim 1, further comprising:

- navigation information managing the playlist file to be reproduced.

7. (Currently Amended) The optical ~~computer-readable~~ recording medium of claim 6, wherein the different playback paths are related to different stories.

8. (Canceled)

9. (Currently Amended) The optical ~~computer readable~~ recording medium of claim 1, wherein

the data directory stores a plurality of clip files of the video data having multiple playback paths, and

the video data for each playback path is stored in a different clip file.

10-15. (Cancelled)

16. (Currently Amended) A method of reproducing a data structure for managing reproduction of video data having multiple playback paths from a recording medium, the method comprising:

reproducing at least one playlist file from the recording medium, the playlist file including at least one playitem, the playitem identifying a same playing interval in each clip file of the plurality of clip files associated with the multiple playback paths, each clip file being associated with one path of the multiple playback paths, the playitem identifying the clip information files associated with the clip files of the multiple playback paths playing interval, the playlist file storing connection information between a previous playitem and a current playitem;

~~reproducing the clip file of the video data having multiple playback paths from the recording medium, the video data including a plurality of data packets, each data packet having a packet number differentiating the data packet from the plurality of data packets;~~

~~reproducing at least one clip file of the video data having multiple playback paths from the recording medium; and~~

reproducing management information for managing reproduction of the video data having multiple playback paths from a management area of the recording medium, the video data including a plurality of data packets, each data packet having a packet number differentiating the data packet from the plurality of data packets, the management information including [[a]] the plurality of clip information files, the clip file being associated with one of the clip information files, the associated clip information file providing at least one map, the map identifying at least one entry point for the associated clip file by identifying the packet number of the data packet of the at least one entry point, the map mapping a presentation time stamp to a corresponding address in the associated clip file; and

reproducing at least one clip file of the video data having multiple playback paths based on the playlist file and the management information.

17. (Previously Presented) The method of claim 16, wherein the reproducing step reproduces a group of playlist files based on navigation information for managing the playlist files.

18. (Currently Amended) A method of recording a data structure for managing reproduction of at least video data having multiple playback paths on a recording medium, the method comprising:

recording a plurality of clip files of the video data having multiple paths on the recording medium, each clip being associated with one path of the multiple playback paths, the video data including a plurality of data packets, each data packet having a packet number differentiating the data packet from the plurality of data packets;

recording management information for managing reproduction of the video data of the recording medium, the management information including a plurality of clip information files, each clip file being associated with one of the clip information files, the associated clip information file providing at least one map identifying at least one entry point for the associated clip file by identifying the packet number of the data packet of the at least one entry point, the map mapping a presentation time stamp to a corresponding address in the associated clip file; and

recording at least one playlist file including at least one playitem on the recording medium, the playitem identifying a same playing interval in each clip file of the plurality of clip files associated with the multiple playback paths, the playitem identifying the clip information files associated with the clip files of the multiple playback paths playing interval, the playlist file storing connection information between a previous playitem and a current playitem.

19. (Cancelled)

20. (Currently Amended) An apparatus for recording a data structure

for managing reproduction of at least video data having multiple playback paths, comprising:

an optical pickup configured to record data on a recording medium; and
a controller, operably coupled to the optical pickup, configured to control the optical pickup to record a plurality of clip files of the video data having multiple playback paths on the recording medium, each clip file being associated with one path of the multiple playback paths, the controller configured to control the optical pickup to record management information for managing reproduction of the video data having multiple playback paths on the recording medium, the video data including a plurality of data packets, each data packet having a packet number differentiating the data packet from the plurality of data packets, the management information including a plurality of clip information files, each clip file being associated with one of the clip information files, the associated clip information file providing at least one map identifying at least one entry point for the associated clip file by identifying the packet number of the data packet of the at least one entry point, the map mapping a presentation time stamp to a corresponding address in the associated clip file, the controller configured to control the optical pickup to record at least one playlist file including at least one playitem on the recording medium, the playitem identifying a same playing interval in each clip file of the plurality of clip files associated with the multiple playback paths, the playitem and identifying the clip information files associated with the clip files of the multiple playback paths playing interval, the playlist file storing connection

information between a previous playitem and a current playitem, ~~the playlist file storing information identifying which playback paths are associated with the playlist.~~

21. (Currently Amended) An apparatus for reproducing a data structure for managing reproduction of at least video data having multiple playback paths, comprising:

an optical pickup configured to reproduce data recorded on a recording medium; and

a controller, operably coupled to the optical pickup, configured to control the optical pickup to reproduce at least one playlist file including at least one playitem from the recording medium, the playitem identifying a same playing interval in each clip file of the plurality of clip files associated with the multiple playback paths, each clip file being associated with one path of the multiple playback paths, the playitem identifying ~~at least one clip~~ information files associated with ~~the clip file and identifying the information files associated with~~ the clip files of the multiple playback paths ~~playing interval~~, the playlist file storing connection information between a previous playitem and a current playitem, ~~the playlist file including information for identifying a total number of playback paths associated with the playlist,~~

the controller configured to control the optical pickup to reproduce management information for managing reproduction of the video data having multiple playback paths from the recording medium, the video data including a

plurality of data packets, each data packet having a packet number differentiating the data packet from the plurality of data packets, the management information including [[a]] the plurality of clip information files, each clip file being associated with one of the clip information files, each associated clip information file providing at least one map, the map identifying at least one entry point for the associated clip file by identifying the packet number of the data packet of the at least one entry point, the map mapping a presentation time stamp to a corresponding address in the associated clip file, and

the controller configured to control the optical pickup to reproduce at least one clip file of the video data from the recording medium based on the playlist file and the management information.

22. (Cancelled)

23. (Previously Presented) The apparatus of claim 20, wherein a group of playlist files is associated with each playback path.

24. (Previously Presented) The apparatus of claim 23, wherein navigation information is stored on the recording medium, the navigation information for managing the playlist file.

25. (Previously Presented) The apparatus of claim 21, wherein a group

of playlist files is associated with each playback path.

26. (Previously Presented) The apparatus of claim 25, wherein navigation information is stored on the recording medium, the navigation information for managing the playlist file.

27-28. (Cancelled)

29. (Previously Presented) The method of claim 16, further comprising: reproducing navigation information stored on the recording medium, the navigation information for managing the playlist file.

30. (Previously Presented) The method of claim 29, wherein the reproducing at least one playlist file reproduces a group of playlist files based on the navigation information.

31. (Cancelled)

32. (Previously Presented) The method of claim 18, further comprising: recording navigation information for managing the playlist file.

33. (Previously Presented) The method of claim 32, wherein the recording at least one playlist file records a group of playlist files based on the

navigation information.

34-36. (Cancelled)

37. (Currently Amended) The optical ~~computer-readable~~ recording medium of claim 1, wherein the at least one clip file is linked to more than one of the plurality of playlist files.

38-43. (Cancelled)

44. (Currently Amended) The optical ~~computer-readable~~ recording medium of claim 1, wherein the clip file includes source packets, the source packets including a header and a transport packet, the transport packet including a packet identifier (PID), the source packet including a source packet number indicating the address in the clip file.

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